

**REPORT TO THE TWENTY-THIRD LEGISLATURE
STATE OF HAWAII
2006**

ON THE

**BOARD OF CERTIFICATION OF OPERATING PERSONNEL IN
WASTEWATER TREATMENT FACILITIES**

**PURSUANT TO SECTION 340B-12, HAWAII REVISED STATUTES
REQUIRING THE DEPARTMENT OF HEALTH TO PROVIDE
AN ANNUAL REPORT OF THE ACTIVITIES OF THE
BOARD OF CERTIFICATION OF OPERATING PERSONNEL IN
WASTEWATER TREATMENT FACILITIES**

**PREPARED BY:
STATE OF HAWAII
DEPARTMENT OF HEALTH
BOARD OF CERTIFICATION OF OPERATING PERSONNEL IN
WASTEWATER TREATMENT FACILITIES
OCTOBER 2005**

BOARD OF CERTIFICATION OF OPERATING PERSONNEL IN WASTEWATER TREATMENT PLANT FACILITIES

EXECUTIVE SUMMARY

The Board of Certification of Operating Personnel in Wastewater Treatment Plants (hereafter, the Board) conducted seven (7) meetings during the year.

Operator certification examinations were administered by Board members statewide in February and August to 77 operators, with 17 successfully passing the examinations, for an overall passing rate of 22 percent. Hawaii's 2005 passing rate was higher (22 vs. 18 percent) than the previous year. The passing rates for Grades 3 and 4 are typically lower than for Grades 1 and 2. Passing rates for each grade have fluctuated over the years.

There are presently a total of 441 certified wastewater treatment plant operators in Hawaii. 437 have permanent certifications and four (4) have conditional operator certificates.

Significant Board actions during the year include:

- Reviewing all applications for examinations;
- Conducting two examinations annually;
- Classifying wastewater treatment plants;
- Evaluating applications for issuing reciprocity certifications;
- Evaluating operator college transcripts, outside training courses, and workshops for granting continuing educational units (CEUs);
- Implementing HAR, Chapter 11-61, rules for the mandatory certification of personnel in wastewater treatment plants;
- Issuing permanent and temporary certificates;
- Reviewing and issuing operator certificate renewals;
- Reviewing the operating budget; and
- Conducting a joint meeting with the Board of Certification of Public Water System Operators.

Funding Source for the Board

Act 238, SLH 1999 amended Chapter 340B, Hawaii Revised Statutes (HRS) by establishing the Wastewater Treatment Certification Board (WTCB) Special Fund. The revenues for this fund are generated from monies collected for registration, certificate renewal, reciprocity and temporary certificate fees and are to be used specifically for defraying the costs of the operations of the Board. In 2005, approximately \$24,000 in revenues was collected. At the end of the fiscal year, a cash balance of \$49,446.65 existed in the fund.

2005 ANNUAL REPORT

BOARD OF CERTIFICATION OF OPERATING PERSONNEL IN WASTEWATER TREATMENT FACILITIES

INTRODUCTION

Effective operation and maintenance of wastewater treatment works are essential to prevent pollution of the waters of the state. Also, the efficient management of wastewater treatment works is an important economic asset to the public, to county and state officials, and to operators. Furthermore, certification of wastewater treatment works operators assures the employment of personnel competent to provide proper operation and maintenance, and efficient management of wastewater treatment works.

ORGANIZATION

This Annual Report summarizes the Board's activities and accomplishments during 2005. It also provides information about the Board's organizational structure.

Organizational Structure

Members of the Board are appointed to a four-year term. The Board is comprised of the following members:

Eassie Miller	- Chair, Hawaii Water Environment Association Representative
Marshall Lum	- Secretary, State Department of Health
Wayne Salas	- Operator, City & County of Honolulu
Myron Nomura	- Professional Engineer in private practice
Mansfield Dacay	- Operator, County of Kauai
Charles Dawrs	- Operator, County of Hawaii
vacant	- University of Hawaii engineering faculty
Victor Moreland	- Operator, private sector
vacant	- County of Maui

During the year, the Board was assisted by Linda Hijirida, clerk typist, and Lori Morikami on temporary assignment as Administrator of the Statewide Operator Training Center. The clerk typist and administrator positions are both assigned to the Wastewater Branch, State Department of Health. The clerk typist and administrator positions were unfilled during most of the year as the incumbents resigned from their positions in October 2004.

Additionally, Harold Yee, Chief of the Wastewater Branch, State Department of Health oversees the funding of the Board. At the end of last fiscal year (FY 04) County of Maui representative, Allen Souza, and University of Hawaii engineering faculty, Dr. P.Y. Yang, resigned from their positions on the Board. Their positions were unfilled during FY 05.

Board Meetings During 2005

During the calendar year, the Board held seven meetings on:

January 6	March 31	July 7	November 18
February 22	May 12	September 23	

A special meeting with the Board of Certification of Public Water System Operators was held on February 22, 2004 to achieve consistency on items common to both boards.

Summary of Certification Examinations

The Board conducted two examinations statewide for all grades of wastewater treatment plant operators during 2005. The first was held in February 2005 and the second in August 2005. The results of these examinations are depicted in the following tables:

February 2005 Examination

Grade	# Applicants	# Passed	Passing %
1	7	5	71
2	6	2	33
3	7	0	0
4	19	1	5
Total	39	8	21

August 2005 Examination

Grade	# Applicants	# Passed	Passing %
1	8	6	75
2	2	0	0
3	10	3	30
4	18	0	0
Total	38	9	24

COMPARISON OF PASSING PERCENTAGES

Statewide

Date of Exam	Grade 1	Grade 2	Grade 3	Grade 4
August 2005	75	0	30	0
February 2005	71	33	0	5
August 2004	40	0	44	4
February 2004	33	33	0	15
August 2003	80	45	32	16
February 2003	50	63	13	16
August 2002	73	53	17	6
February 2002	50	25	5	20
August 2001	69	20	4	8
February 2001	33	20	22	5

STATISTICS:

A total of 77 operators took the examination in 2005 of which 17 passed for an overall passing rate of 22 percent. As shown in the above table, the passing percentages for all grades have been fluctuating in recent years.

During the past 5 years, passing percentages for Grade 1 ranged from 33% to 80%, Grade 2 ranged from 0% to 63%, Grade 3 ranged from 0% to 44%, and Grade 4 ranged from 0% to 20%. In general, Grades 1 and 2 have higher passing rates than for Grades 3 and 4 which have harder exams.

**ASSOCIATION OF BOARD OF CERTIFICATION EXAMINATION (ABC)
PASSING PERCENTAGE COMPARISON BETWEEN
HAWAII AND THE 2004 NATIONAL AVERAGE**

Hawaii's vs National Average	Grade 1	Grade 2	Grade 3	Grade 4
Hawaii's 2005 Average	73	25	18	3
Hawaii's 2004 Average	36	20	26	10
Hawaii's 2003 Average	67	53	26	16
Hawaii's 2002 Average	67	41	10	14
Hawaii's 2001 Average	54	20	12	7
National 2004 Average	67	54	37	45

The average passing rate for Grade 1 exceeded the national average while Grades 2, 3, and 4 have typically been below the national average.

Operators are encouraged to enroll in correspondence courses provided by California State University Sacramento (CSUS) and in courses offered by the Statewide Wastewater Operator Training Center. Additional training courses from other sources including online web based courses are currently being evaluated by the Board to enhance the operator's learning progress.

The ABC Certification Examination questions reference the courses offered by CSUS. Analysis has proven that the majority of the operators who have completed the CSUS courses and have taken courses offered by the training center are passing the ABC Certification examinations.

Statewide Wastewater Operator Training Center

The State Department of Health established the training center 17 years ago in September 1988. During 2005, the training center conducted 74 training sessions statewide to 562 registrants.

Training courses included introductory basic wastewater courses to more complex advanced courses such as activated sludge, sludge conditioning and anaerobic digestion.

The Steering Committee of the Training Center has placed great emphasis in improving the quality of the training program. In recent years, additional training videotapes, textbooks, interactive CD-ROMs, and a new study guide for the certification examination refresher course were purchased to enhance the learning opportunities afforded to operators. Desktop computers have been purchased for the neighbor island counties. Recent purchases of multi-media projectors for the outer islands modernize the learning process as instructors begin to use Power Point presentations.

An analysis of all exam participants who have successfully completed wastewater treatment plant operator courses with the training center have significantly better results than those who did not participate in the training program.

Joint Meeting

As needed, the Board of Certification meets with the Steering Committee of the Statewide Wastewater Operator Training Center to discuss issues pertaining to the training and certification program. Both the Board and the Steering Committee agree that the passing percentages of the exams could improve. The counties, especially the outer islands, have been encouraged to implement additional training and refresher courses for their personnel. During the fiscal year, a joint meeting was not held.

WASTEWATER BRANCH, DEPARTMENT OF HEALTH

The Construction and Operations Section of the Wastewater Branch has assisted the Board in providing information and vital data of all wastewater treatment plants (WWTP) requiring classification. The Board currently maintains a computer file of 169 classified WWTPs in the state.

OTHER SERVICES PROVIDED BY THE BOARD OF CERTIFICATION

Services	2001	2002	2003	2004	2005
Number of operators:					
Permanent Certifications	466	460	420	420	437
Conditional Certifications (Two year renewals)	14	8	6	6	4
Requests for temporary certificates	12	3	9	12	2
Requests for reciprocity certificates	7	3	7	2	5
Evaluation of college transcripts, etc. for CEUs	15	14	12	19	37
Classification of Treatment Plants	28	14	15	9	8

A number of wastewater treatment plant operators have completed college/university courses. The Board evaluated courses related to the wastewater profession and awarded appropriate “continuing educational unit” (CEU) credits to operators applying for exams. CEUs are required as part of the educational requirements for certification examinations in addition to work experience. The recent amendments to HAR Chapter 11-61 changed the renewal period for active operator certificates to every two years instead of annually. This change allows the Board to reduce paperwork and costs for annual renewals and be compatible with other member states of the Association of Board of Certification (ABC). The new 2 CEU renewal requirement also caused the number of operator requests for Board determination of allowable CEU credits for college transcripts and short courses to double during the year (37 vs. 19).

SIGNIFICANT BOARD ACTIONS

The primary goal of the certification program is to ensure that all wastewater treatment plants are operated by qualified personnel. During the year, the Board achieved the following objectives:

1. Continued to review and determine the number of CEUs credited for satisfactory completion of new training courses offered by other institutions;
2. Continued to classify or reclassify wastewater treatment facilities throughout the state;
3. Resolved concerns submitted by operators regarding applications and qualifications for examination, and the new certificate renewal requirements;
4. Continued efforts to inform operators of the Board's functions and decisions via minutes of the Board meetings. Meetings are open to any operator interested in attending or making a presentation before the Board;

5. Continued utilizing ABC Services for the development and scoring of the bi-annual certification examinations. The ABC Services standardized examinations consist of 100 questions which are selected by Board members from a pool of questions provided by ABC Services for each grade level. Scoring 70 percent or higher on the exam is required to pass the exam;
6. Evaluated five applications for reciprocity from out-of-state operators;
7. Continued to provide information to operators and other agencies about the certification program, lists of CEUs/training earned, issuance of certificates and other matters such as the renewal of licenses;
9. Reviewed and updated all forms and related instructional sheets;
10. Implemented amendments to Hawaii Administrative Rules (HAR), Title 11, Chapter 61, Mandatory Certification of Operating Personnel in Wastewater Treatment Facilities, dated January 20, 2002;
11. Reviewed and approved applications for renewal of 441 operator certificates;
12. Conducted a joint meeting with the Board of Certification of Public Water System Operators to achieve consistency on matters common to both boards. Both Boards agreed to have a joint meeting annually; and
13. Extended the operator certificate renewal deadline by up to six months for operators who could not meet the new two year deadline of October 15, 2004.

Schedule of Meetings for Year 2006

The Board has scheduled seven (7) meetings for the coming calendar year in:

January	March	July	November
February	May	September	

General business to be conducted at these meetings include:

1. Providing an informational meeting for operators in attendance;
2. Reviewing and processing applications for certification examinations and discussing the results of the exams;
3. Reviewing and preparing responses to correspondence received from operating personnel and other related agencies;

4. Reviewing, and approving or denying operator applications for temporary certificates;
5. Reviewing and issuing reciprocity certifications to qualifying operators from other states; and
6. Reviewing, and approving or denying operator certificate renewals.

Expenditures During the Year (July 2004 to June 2005):

Object Code	Description	Cost
3020	ABC Examinations	\$3,059.00
3510	Membership Dues	\$900.00
3990	Printing of Certificates	\$140.00
4210 & 4290	Intra- State Airline Tickets for State Employees & Others	\$5,222.06
4310 & 4390	Intra-State Travel Per Diem for State Employees & Others	\$300.00
4410	Out-of- State Airline Tickets	\$678.55
4510	Out-of- State Per Diem	\$650.00
4515	Excess Lodging	\$244.30
4610	Car Rental	\$68.78
7210	Training	\$390.00
7230	Photocopies	\$42.19
	Total	\$11,694.88

The Board is considering making a request to increase its annual budget of \$12,688 to include costs for: the purchase of computerized equipment such as a laptop computer, software, and to provide sufficient travel funds to send a representative to the ABC annual conference and to conduct meetings on the outer islands. The meetings on the outer islands will afford neighbor island operators the opportunity to attend or testify at Board meetings.

Funding Source for the Board

Act 238, SLH 1999, which amended Chapter 340B, Hawaii Revised Statutes (HRS), established the Wastewater Treatment Certification Board (WTCB) Special Fund. The revenues for this fund are generated from monies collected for registration, renewal, reciprocity and temporary certificate fees and are to be used specifically for financing the operations of the Board. During the fiscal year, revenues from certification fees and interest generated \$23,945 of additional funds. At the close of the fiscal year, a cash balance of \$49,446.65 existed in the fund.